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EXAMINER	
FOX, JAMAL A	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,309	IDO ET AL.	
	Examiner	Art Unit	
	Jamal A. Fox	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11,12,14,15,17,19,20,22 and 23* is/are rejected.

7)☒ Claim(s) *2,10,13,16,18,21 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/070,309.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/5/02 & 7/31/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 15, 17, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhu et al. (U.S. Patent No. 5,768,527).

Referring to claim 9, Zhu et al. discloses a data receiving apparatus, comprising:

receiving (receiver, col. 2 lines 5-15) means for receiving a data;

loss detecting means (packet processor, col. 4 lines 55-60) for detecting loss of data when the data is received by said receiving means;

playback (playback, col. 1 lines 45-65) time calculating means for calculating playback time of the data received by said receiving means;

round-trip (round trip, col. 5 lines 55-65) time receiving means for receiving a data round-trip between a transmitting side and the data receiving apparatus; and

retransmission request (retransmission request, col. 6 lines 35-40) deciding means for deciding, when a lost data is detected by said loss detecting means (packet processor, col. 4 lines 55-60); whether a retransmission request (retransmission request, col. 6 lines 35-40) for the lost data is made or not based on the playback (playback, col. 1 lines 45-65) time calculated by said playback (playback, col. 1 lines 45-

65)time calculating means and the data round-trip (round trip, col. 5 lines 55-65) time received by said round-trip (round trip, col. 5 lines 55-65) time receiving means.

Referring to claim 15, Zhu et al. discloses a data receiving apparatus, comprising:

calculating means for calculating a data round-trip (round trip, col. 5 lines 55-65) time between a transmitting side and the data receiving apparatus by subtracting transmission time of a first data transmitted to the transmitting side and a differential time between reception time of the first data at the transmitting side and transmission time of a second data transmitted from the transmitting side, the differential time being included in the second data, from reception time of the second data;

receiving (receiver, col. 2 lines 5-15) means for receiving a data;

loss detecting means (packet processor, col. 4 lines 55-60) for detecting loss of data when the data is received by said receiving means;

playback (playback, col. 1 lines 45-65) time calculating means for calculating playback time of the data received by said receiving means; and

retransmission request (retransmission request, col. 6 lines 35-40) deciding means for deciding, when a lost data is detected by said loss detecting means (packet processor, col. 4 lines 55-60), whether a retransmission request for the lost data is made or not based on the playback (playback, col. 1 lines 45-65) time calculated by said playback (playback, col. 1 lines 45-65) time calculating means and the data round-trip (round trip, col. 5 lines 55-65) time calculated by said calculating means.

Referring to claim 17, Zhu et al. discloses an information communication terminal apparatus including the data receiving (receiver, col. 2 lines 5-15) apparatus in any one of claims 9 through 15.

Referring to claim 19, Zhu et al. discloses a data communication system comprising a data transmitting apparatus and a data receiving apparatus,

wherein the data transmitting apparatus comprises:

storing (buffer, Figures 3-8 and respective portions of the spec.) means for storing a retransmittable data only;

retransmitting (retransmission, col. 6 lines 35-40) means for retransmitting a data that is extracted from the data stored in said storing means corresponding to a retransmission request (retransmission request, col. 6 lines 35-40) of the data receiving apparatus;

calculating means for calculating a data round-trip (round trip, col. 5 lines 55-65) time between the data receiving apparatus and the data transmitting apparatus; and

transmitting means for transmitting the data round-trip (round trip, col. 5 lines 55-65) time calculated by said calculating means to the data receiving apparatus at a predetermined time interval, and

wherein the data receiving apparatus comprises:

receiving (receiver, col. 2 lines 5-15) means for receiving the data transmitted from the data transmitting apparatus;

loss detecting means (packet processor, col. 4 lines 55-60) for detecting loss of data when the data is received by said receiving means;

playback (playback, col. 1 lines 45-65) time calculating means for calculating playback time of the data received by said receiving means;

round-trip (round trip, col. 5 lines 55-65) time receiving means for receiving the data round-trip time transmitted from said transmitting means; and

retransmission request (retransmission request, col. 6 lines 35-40) deciding means for deciding, when a lost data is detected by said loss detecting means, whether a retransmission request (retransmission request, col. 6 lines 35-40) for the lost data is made or not based on the playback (playback, col. 1 lines 45-65) time calculated by said playback (playback, col. 1 lines 45-65) time calculating means and the data round-trip time received by said round-trip time receiving means (receiver, col. 2 lines 5-15).

Referring to claim 22, Zhu et al. discloses a data communication method in a data communication system comprising a data receiving apparatus and a data transmitting apparatus that retransmits a data which is extracted fro the data stored in storing means for storing (buffer, Figures 3-8 and respective portions of the spec.) a retransmittable data only corresponding to a retransmission request of the data receiving apparatus, said method comprising:

a calculating step in which the data transmitting apparatus calculates a data round-trip (round trip, col. 5 lines 55-65) time between the data receiving apparatus and the data transmitting apparatus;

a transmitting step in which the data transmitting apparatus transmits the data round-trip (round trip, col. 5 lines 55-65) time calculated in the calculating step to the data receiving apparatus at a predetermined time interval;

a receiving (receiver, col. 2 lines 5-15) step in which the data receiving apparatus receives the data transmitted from the data transmitting apparatus;

a loss detecting (packet processor, col. 4 lines 55-60) step in which the data receiving apparatus detects loss of data when the data is received in the receiving step;

a playback (playback, col. 1 lines 45-65) time calculating step in which the data receiving apparatus calculates playback time of the data received in the receiving step;

a round-trip (round trip, col. 5 lines 55-65) time receiving step in which the data receiving apparatus receives the data round-trip (round trip, col. 5 lines 55-65) time transmitted in the transmitting step; and

a retransmission request (retransmission request, col. 6 lines 35-40) deciding step in which the data receiving apparatus decides, when a lost data is detected in the loss detecting step, whether a retransmission request (retransmission request, col. 6 lines 35-40) for the lost data is made of not based on the playback (playback, col. 1 lines 45-65) time calculated in the playback (playback, col. 1 lines 45-65) time calculating step and the data round-trip (round trip, col. 5 lines 55-65) time received in the round-trip (round trip, col. 5 lines 55-65) time receiving step.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 9, 11, 12, 14, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Paul et al. (U.S. Patent No. 6,148,005).

Referring to claim 9, Paul et al. discloses a data receiving apparatus, comprising:

receiving (receiver, col. 6 lines 1-7) means for receiving a data;

loss detecting (loss detection, col. 6 lines 60-67) means for detecting loss of data when the data is received by said receiving means;

playback time (playback time, col. 5 lines 40-50) calculating means for calculating playback time (playback time, col. 5 lines 40-50) of the data received by said receiving means;

round-trip time (round-trip time, col. 5 lines 35-50) receiving means for receiving a data round-trip between a transmitting side and the data receiving (receiver, col. 6 lines 1-7) apparatus; and

retransmission request (retransmission request, col. 4 lines 50-60) deciding means for deciding, when a lost data is detected by said loss detecting (loss detection, col. 6 lines 60-67) means; whether a retransmission request (retransmission request, col. 4 lines 50-60) for the lost data is made or not based on the playback time (playback

time, col. 5 lines 40-50) calculated by said playback time (playback time, col. 5 lines 40-50) calculating means and the data round-trip time received by said round-trip time (round-trip time, col. 5 lines 35-50) receiving means.

Referring to claim 11, Paul et al. discloses the data receiving apparatus according to claim 9, further comprising:

measuring means for measuring a differential time (difference, col. 5 lines 35-45) between reception time of a first data transmitted from a transmitting side and transmission time of a second data to be transmitted to the transmitting side in response to the first data; and

transmitting means for transmitting the differential time (difference, col. 5 lines 35-45) measured by said measuring means included in the second data to the transmitting side at a predetermined time interval (time interval, col. 6 lines 45-55).

Referring to claim 12, Paul et al. discloses the data receiving apparatus according to claim 9, further comprising transmission time receiving (receiver, col. 6 lines 1-7) means for receiving transmission time of the first data transmitted from the transmitting side, and wherein said transmitting means transmits the transmission time received by said transmission time receiving means together with the differential time (difference, col. 5 lines 35-45) measured by said measuring means to the transmitting side at the predetermined time interval (time interval, col. 6 lines 45-55).

Referring to claim 14, Paul et al. discloses the data receiving apparatus according to claim 11, further comprising altering means that includes means for holding the data round-trip time (round-trip time, col. 5 lines 35-50) received by said data round-

trip time (round-trip time, col. 5 lines 35-50) receiving means and for altering the time interval at which the differential time (difference, col. 5 lines 35-45) measured by said measuring means is transmitted to the transmitting side in accordance with a time difference between a present data round-trip time (round-trip time, col. 5 lines 35-50) and a previous data round-trip time (round-trip time, col. 5 lines 35-50) that are received by said round-trip time (round-trip time, col. 5 lines 35-50) receiving means.

Referring to claim 15, Paul et al. discloses a data receiving apparatus, comprising:

calculating means for calculating a data round-trip time (round-trip time, col. 5 lines 35-50) between a transmitting side and the data receiving apparatus by subtracting transmission time of a first data transmitted to the transmitting side and a differential time (difference, col. 5 lines 35-45) between reception time of the first data at the transmitting side and transmission time of a second data transmitted from the transmitting side, the differential time (difference, col. 5 lines 35-45) being included in the second data, from reception time of the second data;

receiving (receiver, col. 6 lines 1-7) means for receiving a data;

loss detecting (loss detection, col. 6 lines 60-67) means for detecting loss of data when the data is received by said receiving means;

playback time (playback time, col. 5 lines 40-50) calculating means for calculating playback time of the data received by said receiving means; and

retransmission request (retransmission request, col. 4 lines 50-60) deciding means for deciding, when a lost data is detected by said loss detecting (loss detection,

col. 6 lines 60-67) means, whether a retransmission request for the lost data is made or not based on the playback time calculated by said playback time calculating means and the data round-trip time (round-trip time, col. 5 lines 35-50) calculated by said calculating means.

Referring to claim 17, Paul et al. discloses an information communication terminal apparatus including the data receiving (receiver, col. 6 lines 1-7) apparatus in any one of claims 9 through 15.

5. Claims 1, 3-9, 11, 12, 14, 15, 17, 19, 20, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Radha et al. (U.S. Patent No. 6,700,893).

Referring to claim 1, Radha et al. discloses a data transmitting apparatus, comprising:

storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) for storing a retransmittable data only;

retransmitting (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) means for retransmitting a data that is extracted from the data stored in said storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) corresponding to a retransmission request of a receiving side;

calculating means for calculating a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20), time between the receiving side and the data transmitting apparatus; and

transmitting means for transmitting the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means to the receiving

side at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25).

Referring to claim 3, Radha et al. discloses the data transmitting apparatus according to claim 1, wherein said calculating means comprises:

means for measuring (measured, col. 16 lines 1-10) transmission time of a first data to be transmitted to the receiving side;

means for measuring (measured, col. 16 lines 1-10) reception time of a second data transmitted from the receiving side in response to the first data; and

means for calculating the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time by subtracting a differential time between reception time of the first data at the receiving side and transmission time of the second data, the differential time being included in the second data, and the measured (measured, col. 16 lines 1-10) first data transmission time from the measured (measured, col. 16 lines 1-10) second data reception time.

Referring to claim 4, Radha et al. discloses the data transmitting apparatus according to claim 3, wherein said calculating means calculates, when the measured (measured, col. 16 lines 1-10) first data transmission time is transmitted to the receiving side and the first data transmission time is included in the second data together with the differential time, the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time using the first data transmission time included in the second data.

Referring to claim 5, Radha et al. discloses the data transmitting apparatus according to claim 1, further comprising packetizing means for packetizing the data

round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means together with other information to form a single packet, and wherein said transmitting means transmits the single packet formed by said packetizing means to the receiving side at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25).

Referring to claim 6, Radha et al. discloses the data transmitting apparatus according to claim 1, further comprising:

monitoring (controller, Fig. 1 and respective portions of the spec.) means for monitoring the status of data communication; and

altering means for altering the time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25) at which the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means is transmitted to the receiving side in accordance with the result of the monitoring by said monitoring means (controller, Fig. 1 and respective portions of the spec.).

Referring to claim 7, Radha et al. discloses the data transmitting apparatus according to claim 1, further comprising altering means that includes means for holding (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means for altering the time interval at which a present data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means is transmitted to the receiving side in accordance with a time difference between the present data round-trip (round-trip, col. 11 lines 49-60 and col.

16 lines 10-20) time and a previous data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means.

Referring to claim 8, Radha et al. discloses a data transmitting apparatus, comprising:

storing (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) means for storing a retransmittable data only;

retransmitting (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) means for retransmitting a data that is extracted from the data stored in said storing means corresponding to a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request of a receiving side;

measuring (measured, col. 16 lines 1-10) means for measuring (measured, col. 16 lines 1-10) a differential time between reception time of a first data transmitted from the receiving side and transmission time of a second data to be transmitted to the receiving side in response to the first data; and

transmitting means for transmitting the differential time measured (measured, col. 16 lines 1-10) by said measuring (measured, col. 16 lines 1-10) means included in the second data to the receiving side at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25).

Referring to claim 9, Radha et al. discloses a data receiving apparatus, comprising:

receiving (receiver, col. 1 lines 35-65) means for receiving a data;

loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means for detecting loss (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) of data when the data is received by said receiving means;

playback (playback, col. 2 lines 5-10) time calculating means for calculating playback time of the data received by said receiving means;

round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means for receiving a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) between a transmitting side and the data receiving apparatus; and

retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding means for deciding, when a lost data is detected by said loss detecting means; whether a retransmission request for the lost data is made or not based on the playback time calculated by said playback (playback, col. 2 lines 5-10) time calculating means and the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time received by said round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means.

Referring to claim 11, Radha et al. discloses the data receiving apparatus according to claim 9, further comprising:

measuring (measured, col. 16 lines 1-10) means for measuring a differential time between reception time of a first data transmitted from a transmitting side and transmission time of a second data to be transmitted to the transmitting side in response to the first data; and

transmitting means for transmitting the differential time measured (measured, col. 16 lines 1-10) by said measuring (measured, col. 16 lines 1-10) means included in the second data to the transmitting side at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25).

Referring to claim 12, Radha et al. discloses the data receiving apparatus according to claim 9, further comprising transmission time receiving (receiver, col. 1 lines 35-65) means for receiving transmission time of the first data transmitted from the transmitting side, and wherein said transmitting means transmits the transmission time received by said transmission time receiving means together with the differential time measured (measured, col. 16 lines 1-10) by said measuring (measured, col. 16 lines 1-10) means to the transmitting side at the predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25).

Referring to claim 14, Radha et al. discloses the data receiving apparatus according to claim 11, further comprising altering means that includes means for holding the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time received by said data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means and for altering the time interval at which the differential time measured (measured, col. 16 lines 1-10) by said measuring (measured, col. 16 lines 1-10) means is transmitted to the transmitting side in accordance with a time difference between a present data round-trip time and a previous data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time that are received by said round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means.

Referring to claim 15, Radha et al. discloses a data receiving (receiver, col. 1 lines 35-65) apparatus, comprising:

calculating means for calculating a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time between a transmitting side and the data receiving apparatus by subtracting transmission time of a first data transmitted to the transmitting side and a differential time between reception time of the first data at the transmitting side and transmission time of a second data transmitted from the transmitting side, the differential time being included in the second data, from reception time of the second data;

receiving (receiver, col. 1 lines 35-65) means for receiving a data;

loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means for detecting loss of data when the data is received by said receiving means;

playback (playback, col. 2 lines 5-10) time calculating means for calculating playback time of the data received by said receiving means; and

retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding means for deciding, when a lost data is detected by said loss detecting means, whether a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request for the lost data is made or not based on the playback time (playback, col. 2 lines 5-10) calculated by said playback time (playback, col. 2 lines 5-10) calculating means and the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means.

Referring to claim 17, Radha et al. discloses an information communication terminal apparatus including the data receiving apparatus in any one of claims 9 through 15.

Referring to claim 19, Radha et al. discloses a data communication system comprising a data transmitting apparatus and a data receiving apparatus,

wherein the data transmitting apparatus comprises:

storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) for storing a retransmittable data only;

retransmitting (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) means for retransmitting a data that is extracted from the data stored in said storing means corresponding to a retransmission request of the data receiving apparatus;

calculating means for calculating a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time between the data receiving apparatus and the data transmitting apparatus; and

transmitting means for transmitting the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated by said calculating means to the data receiving apparatus at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25), and

wherein the data receiving apparatus comprises:

receiving (receiver, col. 1 lines 35-65) means for receiving the data transmitted from the data transmitting apparatus;

loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means for detecting loss of data when the data is received by said receiving means;

playback (playback, col. 2 lines 5-10) time calculating means for calculating playback time of the data received by said receiving means;

round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means for receiving the data round-trip time transmitted from said transmitting means; and

retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding means for deciding, when a lost data is detected by said loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means, whether a retransmission request for the lost data is made or not based on the playback time calculated by said playback (playback, col. 2 lines 5-10) time calculating means and the data round-trip time received by said round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving means.

Referring to claim 20, Radha et al. discloses a data communication system comprising a data transmitting apparatus and a data receiving apparatus,

wherein the data transmitting apparatus comprises:

storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) for storing a retransmittable data only;

retransmitting (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) means for retransmitting a data that is extracted from the data stored in said storing means

corresponding to a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request of the data receiving apparatus;

measuring (measured, col. 16 lines 1-10) means for measuring (measured, col. 16 lines 1-10) a differential time between reception time of a first data transmitted from the data receiving apparatus and transmission time of a second data to be transmitted to the data receiving apparatus in response to the first data; and

transmitting means for transmitting the differential time measured (measured, col. 16 lines 1-10) by said measuring means included in the second data to the data receiving apparatus at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25), and

wherein the data receiving apparatus comprises:

calculating means for calculating a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time between the data transmitting apparatus and the data receiving apparatus by subtracting transmission time of the first data transmitted to the data transmitting apparatus and the differential time included in the second data transmitted from the data transmitting apparatus from reception time of the second data;

receiving (receiver, col. 1 lines 35-65) means for receiving the data transmitted from the data transmitting apparatus;

loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means for detecting loss (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) of data when the data is received by said receiving means;

playback (playback, col. 2 lines 5-10) time calculating means for calculating playback time of the data received by said receiving means; and

retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding means for deciding, when a lost data is detected by said loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) means, whether a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request for the lost data is made or not base on the playback (playback, col. 2 lines 5-10) time calculated by said playback (playback, col. 2 lines 5-10) time calculating means and the data round-trip time calculated by said calculating means.

Referring to claim 22, Radha et al. discloses a data communication method in a data communication system comprising a data receiving apparatus and a data transmitting apparatus that retransmits a data which is extracted fro the data stored in storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) for storing a retransmittable (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) data only corresponding to a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request of the data receiving apparatus, said method comprising:

a calculating step in which the data transmitting apparatus calculates a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time between the data receiving apparatus and the data transmitting apparatus;

a transmitting step in which the data transmitting apparatus transmits the data round-trip time calculated in the calculating step to the data receiving apparatus at a

predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25);

a receiving (receiver, col. 1 lines 35-65) step in which the data receiving apparatus receives the data transmitted from the data transmitting apparatus;

a loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) step in which the data receiving apparatus detects loss of data when the data is received in the receiving step;

a playback (playback, col. 2 lines 5-10) time calculating step in which the data receiving apparatus calculates playback (playback, col. 2 lines 5-10) time of the data received in the receiving step;

a round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving step in which the data receiving apparatus receives the data round-trip (round-trip, col. 11 lines 49-60, and col. 16 lines 10-20) time transmitted in the transmitting step; and

a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding step in which the data receiving apparatus decides, when a lost data is detected in the loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) step, whether a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request for the lost data is made of not based on the playback (playback, col. 2 lines 5-10) time calculated in the playback time calculating step and the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time received in the round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time receiving step.

Referring to claim 23, Radha et al. discloses a data communication method in a data communication system comprising a data receiving apparatus and a data transmitting apparatus that retransmits a data which is extracted from the data stored in storing means (buffer, Figures 1, 2, 4 and 5 and respective portions of the spec.) for storing a retransmittable data only corresponding to a retransmission request of the data receiving apparatus, said method comprising:

a measuring (measured, col. 16 lines 1-10) step in which the data transmitting apparatus measures (measured, col. 16 lines 1-10) a differential time between reception time of a first data transmitted from the data receiving apparatus and transmission time of a second data to be transmitted to the data receiving apparatus in response to the first data;

a transmitting step in which the data transmitting apparatus transmits the differential time measured (measured, col. 16 lines 1-10) in the measuring step included in the second data to the data receiving apparatus at a predetermined time interval (time interval, col. 7 lines 65-67, col. 10 lines 35-40 and col. 14 lines 20-25);

a calculating step in which the data receiving apparatus calculates a data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) between the data transmitting apparatus and the data receiving apparatus by subtracting transmission time of the first stat transmitted to the data transmitting apparatus and the differential time included in the second data transmitted from the data transmitting apparatus from reception time of the second data;

a receiving (receiver, col. 1 lines 35-65) step in which the data receiving apparatus receives the data transmitted from the data transmitting apparatus;

a loss detecting (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) step in which the data receiving apparatus detects loss (packet loss detection, col. 12 lines 55-65 and col. 13 lines 20-25) of data when the data is received in the receiving step;

a playback (playback, col. 2 lines 5-10) time calculating step in which the data receiving apparatus calculates playback time of the data received in the receiving step; and

a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request deciding step in which the data receiving apparatus decides, when a lost data is detected in the loss detecting step, whether a retransmission (retransmission, col. 3 lines 20-30 and col. 16 lines 15-25) request for the lost data is made or not based on the playback (playback, col. 2 lines 5-10) time calculated in the playback (playback, col. 2 lines 5-10) time calculating step and the data round-trip (round-trip, col. 11 lines 49-60 and col. 16 lines 10-20) time calculated in the calculating step.

Allowable Subject Matter

6. Claims 2, 10, 13, 16, 18, 21 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (571) 272-3143. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to 2600 Customer Service whose telephone number is (571) 272-2600.

Jamal A. Fox

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER